

Applicant : Neil H. Bander  
Serial No. : 09/929,665  
Filed : August 13, 2001  
Page : 3 of 13

Attorney's Docket No.: 10448-184009 / MPI1996-  
037P2RDV1ACNA1; CRF D-1912M

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

144. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof that binds to prostate specific membrane antigen (PSMA), comprising an antigen binding portion of an amino acid sequence selected from the group consisting of SEQ ID NO:8 (variable heavy chain), SEQ ID NO:19 (variable light chain), an amino acid sequence of the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126, and an amino acid sequence of the variable light chain produced by the hybridoma having ATCC deposit no. HB-12126.

145. (Cancel)

146. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 144, which comprises an antigen binding portion of an amino acid sequence selected from the group consisting of SEQ ID NO:8 (variable heavy chain) and SEQ ID NO:19 (variable light chain).

147. (Cancel)

148. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 144, which comprises an antigen binding portion of an amino acid sequence selected from the group consisting of an amino acid sequence of the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126, and an amino acid sequence of the variable light chain produced by the hybridoma having ATCC deposit no. HB-12126.

149. (Cancel)

Applicant : Neil H. Bander  
Serial No. : 09/929,665  
Filed : August 13, 2001  
Page : 4 of 13

Attorney's Docket No.: 10448-184009 / MPI1996-  
037P2RDV1ACNA1; CRF D-1912M

150. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof that binds to prostate specific membrane antigen (PSMA), comprising an antigen binding portion of an amino acid sequence encoded by a nucleic acid sequence selected from the group consisting of SEQ ID NO:6 (variable heavy chain), SEQ ID NO:17 (variable light chain), a nucleic acid sequence which encodes the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126, and a nucleic acid sequence which encodes the variable light chain produced by the hybridoma having ATCC deposit no. HB-12126.

151. (Cancel)

152. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 150, which comprises an antigen binding portion of an amino acid sequence encoded by a nucleic acid sequence selected from the group consisting of SEQ ID NO:6 (variable heavy chain) and SEQ ID NO:17 (variable light chain).

153. (Cancel)

154. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 150, which comprises an antigen binding portion of an amino acid sequence encoded by a nucleic acid sequence selected from the group consisting of a nucleic acid sequence which encodes the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126, and a nucleic acid sequence which encodes the variable light chain produced by the hybridoma having ATCC deposit no. HB-12126.

155. (Cancel)

Applicant : Neil H. Bander  
Serial No. : 09/929,665  
Filed : August 13, 2001  
Page : 5 of 13

Attorney's Docket No.: 10448-184009 / MPI1996-  
037P2RDV1ACNA1; CRF D-1912M

156. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 144 or 150, wherein the antibody is a monoclonal antibody or an antigen binding portion derived from a monoclonal antibody.

157. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 144 or 150, wherein the antibody or antigen binding portion thereof is internalized with the prostate specific membrane antigen.

158. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 144 or 150, wherein the antigen binding portion is selected from the group consisting of a Fab fragment, a F(ab')<sub>2</sub> fragment, and a Fv fragment.

159. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 144 or 150, further comprising a cytotoxic drug.

160. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 159, wherein the cytotoxic drug is selected from the group consisting of a therapeutic drug, a compound emitting radiation, molecules of plant, fungal, or bacterial origin, biological proteins, and mixtures thereof.

161. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 159, wherein the cytotoxic drug is a compound emitting radiation.

162. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 161, wherein the compound emitting radiation is an alpha-emitter.

Applicant : Neil H. Bander  
Serial No. : 09/929,665  
Filed : August 13, 2001  
Page : 6 of 13

Attorney's Docket No.: 10448-184009 / MP11996-  
037P2RDV1ACNA1; CRF D-1912M

163. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 162, wherein the alpha-emitter is selected from the group consisting of  $^{212}\text{Bi}$ ,  $^{213}\text{Bi}$ , and  $^{211}\text{At}$ .

164. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 161, wherein the compound emitting radiation is a beta-emitter.

165. (Currently amended) An ~~isolated~~-antibody or antigen binding portion thereof according to claim 164, wherein the beta-emitter is  $^{186}\text{Re}$ .

166. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 164, wherein the beta-emitter is  $^{90}\text{Y}$ .

167. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 161, wherein the compound emitting radiation is a gamma-emitter.

168. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 167, wherein the gamma-emitter is  $^{131}\text{I}$ .

169. (Previously Cancelled)

170. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 160, wherein the cytotoxic drug is a molecule of plant origin.

171. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 160, wherein the cytotoxic drug is a biological protein.

Applicant : Neil H. Bander  
Serial No. : 09/929,665  
Filed : August 13, 2001  
Page : 7 of 13

Attorney's Docket No.: 10448-184009 / MPI1996-  
037P2RDV1ACNA1; CRF D-1912M

172. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 144 or 150, further comprising a label.

173. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 172, wherein the label is selected from the group consisting of a fluorescent label, a biologically-active enzyme label, a radiolabel, a nuclear magnetic resonance active label, a luminescent label, and a chromophore label.

174. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 173, wherein the radiolabel is selected from the group consisting of  $^{32}\text{P}$ ,  $^{125}\text{I}$ ,  $^3\text{H}$ ,  $^{14}\text{C}$ , and  $^{188}\text{Rh}$ .

175. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 173, wherein the label is the radiolabel  $^{131}\text{I}$ .

176. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 173, wherein the label is the radiolabel  $^{99\text{m}}\text{Tc}$ .

177. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 173, wherein the label is the radiolabel  $^{111}\text{In}$ .

178. (Previously presented) An isolated cell which produces the antibody of claim 144 or 150.

179. (Previously presented) The cell of claim 178, which is derived from a lymphocytic cell line.

180. (Previously presented) A composition comprising:

Applicant : Neil H. Bander  
Serial No. : 09/929,665  
Filed : August 13, 2001  
Page : 8 of 13

Attorney's Docket No.: 10448-184009 / MPI1996-  
037P2RDV1ACNA1; CRF D-1912M

an antibody or antigen binding portion thereof according to claim 144 or 150; and  
a pharmaceutically acceptable carrier, excipient, or stabilizer.

181. (Previously presented) A kit for detecting prostate cancer comprising:  
an antibody or antigen binding portion thereof according to claim 172 and means to  
detect the label.

182. (Previously presented) A kit according to claim 181, wherein the label is selected  
from the group consisting of a fluorescent label, a biologically-active enzyme label, a radiolabel,  
a nuclear magnetic resonance active label, a luminescent label, and a chromophore label.

183. (Previously presented) A kit according to claim 181, wherein the antibody or  
antigen binding portion thereof is in a composition further comprising a pharmaceutically  
acceptable carrier, excipient, or stabilizer.

184. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof that  
binds to prostate specific membrane antigen (PSMA), comprising an antigen binding portion of  
an amino acid sequence selected from the group consisting of SEQ ID NO:8 (variable heavy  
chain), SEQ ID NO:19 (variable light chain), an amino acid sequence of the variable heavy chain  
produced by the hybridoma having ATCC deposit no. HB-12126, and an amino acid sequence of  
the variable light chain produced by the hybridoma having ATCC deposit no. HB-12126,  
coupled to a cytotoxic drug of bacterial origin.

185. (Cancel)

186. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof  
according to claim 184, which comprises an antigen binding portion of an amino acid sequence

Applicant : Neil H. Bander  
Serial No. : 09/929,665  
Filed : August 13, 2001  
Page : 9 of 13

Attorney's Docket No.: 10448-184009 / MPI1996-  
037P2RDV1ACNA1; CRF D-1912M

selected from the group consisting of SEQ ID NO:8 (variable heavy chain) and SEQ ID NO:19 (variable light chain).

187. (Cancel)

188. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 184, which comprises an antigen binding portion of an amino acid sequence selected from the group consisting of an amino acid sequence of the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126, and an amino acid sequence of the variable light chain produced by the hybridoma having ATCC deposit no. HB-12126.

189. (Cancel)

190. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof that binds to prostate specific membrane antigen (PSMA), comprising an antigen binding portion of an amino acid sequence encoded by a nucleic acid sequence selected from the group consisting of SEQ ID NO:6 (variable heavy chain), SEQ ID NO:17 (variable light chain), a nucleic acid sequence which encodes the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126, and a nucleic acid sequence which encodes the variable light chain produced by the hybridoma having ATCC deposit no. HB-12126, coupled to a cytotoxic drug of bacterial origin.

191. (Cancel)

192. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 190, which comprises an antigen binding portion of an amino acid sequence encoded by a nucleic acid sequence selected from the group consisting of SEQ ID NO:6 (variable heavy chain) and SEQ ID NO:17 (variable light chain).

Applicant : Neil H. Bander  
Serial No. : 09/929,665  
Filed : August 13, 2001  
Page : 10 of 13

Attorney's Docket No.: 10448-184009 / MPI1996-  
037F2RDV1ACNA1; CRF D-1912M

193. (Cancel)

194. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 190, which comprises an antigen binding portion of an amino acid sequence encoded by a nucleic acid sequence selected from the group consisting of a nucleic acid sequence which encodes the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126, and a nucleic acid sequence which encodes the variable light chain produced by the hybridoma having ATCC deposit no. HB-12126.

195. (Cancel)

196. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 184 or 190, wherein the antibody is a monoclonal antibody or an antigen binding portion derived from a monoclonal antibody.

197. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 184 or 190, wherein the antibody or antigen binding portion thereof is internalized with the prostate specific membrane antigen.

198. (Currently amended) An ~~isolated~~ antibody or antigen binding portion thereof according to claim 184 or 190, wherein the antigen binding portion is selected from the group consisting of a Fab fragment, a F(ab')<sub>2</sub> fragment, and a Fv fragment.

199. (Previously presented) A composition comprising:  
an antibody or antigen binding portion thereof according to claim 184 or 190; and  
a pharmaceutically acceptable carrier, excipient, or stabilizer.